

IN THE UNITED STATES DISTRICT COURT FOR THE  
NORTHERN DISTRICT OF OKLAHOMA

UNITED STATES OF AMERICA, )  
)  
Plaintiff, )  
)  
-vs- ) No. 20-CR-237-JFH  
)  
CARL GENE ORTNER, JR., )  
)  
Defendant. )

\* \* \* \* \*

PARTIAL TRANSCRIPT OF JURY TRIAL PROCEEDINGS  
TESTIMONY OF ARIEL GAFFNEY  
**BEFORE THE HONORABLE JOHN F. HEIL, III**  
UNITED STATES DISTRICT JUDGE

MAY 18, 2021

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A P P E A R A N C E S

MR. RYAN ROBERTS and MS. SHANNON COZZONI, United States  
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Oklahoma, 74119, Assistant United States Attorney on behalf  
of the Plaintiff;

MR. F. RANDOLPH LYNN, 907 South Detroit Avenue, Suite  
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Defendant,

REPORTED BY: KEN SIDWELL, CSR-RPR  
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1                                    MAY 18, 2021 PARTIAL PROCEEDINGS

2                    MR. ROBERTS: Thank you, Your Honor. The  
3 government would call Ariel Gaffney.

4                    THE COURT: All right. Ms. Gaffney, please come  
5 forward.

6                    *(The witness was duly sworn by the Clerk.)*

7                    THE COURT: All right. Ms. Gaffney, you may have  
8 a seat. Get as comfortable as you can, and then you may  
9 remove your mask.

10                   THE WITNESS: Thank you.

11                   THE COURT: You may proceed, counsel.

12                   MR. ROBERTS: Thank you, Your Honor.

13                                    ARIEL GAFFNEY,  
14 being first duly sworn to testify the truth, the whole  
15 truth, and nothing but the truth, testified as follows:

16                                    DIRECT EXAMINATION

17 BY MR. ROBERTS:

18 Q. Good morning.

19 A. Good morning.

20 Q. Would you introduce yourself to the jury, and spell your  
21 first and last name for the court reporter?

22 A. Yes. My name is Ariel Gaffney. A-r-i-e-l.  
23 G-a-f-f-n-e-y.

24 Q. And can you tell us where you work and what is your  
25 current position?

1 A. Yeah. I work at the U.S. National Fish and Wildlife  
2 forensic lab in Ashland, Oregon. And I am a forensic  
3 scientist. So I identify bird remains that are received at  
4 the lab.

5 Q. And is your lab accredited?

6 A. It is.

7 Q. What does that mean?

8 A. Well, most recently our accreditation was this year.  
9 And that means that our protocols are examined by an outside  
10 accrediting body and determined that we are doing what we're  
11 saying and that it is within the standards of the scientific  
12 community.

13 Q. And how long have you worked in your current position?

14 A. Since January 2017. A little over four years.

15 Q. So can you give the jury an idea of what your field of  
16 expertise is?

17 A. Yes. Forensic morphology. So the visual identification  
18 of animals or animal parts. And I'm an ornithologist, which  
19 means a scientist who studies birds. So my expertise is in  
20 the identification of birds or bird remains, or products  
21 made from bird parts.

22 Q. And how long have you been in the field of ornithology?

23 A. I started studying birds in 2012 during my undergraduate  
24 degree.

25 Q. And while we're on that subject, what is your

1 educational background?

2 A. I have a bachelor's degree in science from the  
3 University of Illinois in Champaign-Urbana in biology, and a  
4 master's degree in biology from the University of New  
5 Mexico.

6 Q. And what positions, if any, have you held of expertise  
7 in your field?

8 A. I have been a laboratory assistant for the U.S.  
9 Geological Survey in Hawaii. And I worked as a laboratory  
10 technician at the University of New Mexico on a variety of  
11 avian research projects. And since 2017, I've worked in the  
12 bird unit of the morphology section at the National Fish and  
13 Wildlife forensic lab.

14 Q. And so where you currently work, can you tell the jury  
15 specifically what your current duties are?

16 A. Yes. So I examine and identify bird remains. That  
17 includes carcasses, partial carcasses, bones and loose  
18 feathers to species. I write a report based on those  
19 findings. I technically review other scientist's  
20 morphological reports. I curate our laboratory reference  
21 collection. And I help prepare training documents to teach  
22 bird identification.

23 Q. Can you estimate for the jury approximately how many  
24 cases you worked on as a lead ornithologist in your lab?

25 A. I have completed 65 requests for analysis, which

1 included the identification of over 3,000 evidence items.

2 And I have identified over 90 different species of birds.

3 Q. And in the course of your work, do you routinely

4 identify or be asked to identify eagles?

5 A. I do. Over 20 percent of my casework involves the

6 identification of eagles or eagle remains. I am also

7 involved in a major research project, the identification of

8 North American eagles based on their wing feathers, which

9 will result in a peer reviewed publication.

10 Q. So can you help the jury understand exactly what it is

11 you do to identify eagle feathers?

12 A. Absolutely. So morphology is literally the study of

13 shape. So I look at an item's shape, its size, its color,

14 its texture, and I document the species' diagnostic

15 characters that that item has. And then I use my years of

16 experience and scientific literature, as well as reference

17 to our vast research collection, to make an identification

18 based on those characters. So our reference collection is

19 quite extensive. It's over 12,000 bird specimens from all

20 over the globe. And, yeah, so --

21 Q. So is a reference collection something that you know

22 what a particular species is, and if you have something that

23 you're unsure of, you can compare it?

24 A. Yes. Yeah, it's sometimes called a standards

25 collection, our reference collection. Those are birds of

1 origin we know where they came from and what species it's  
2 from, and that are a representation of what that species  
3 looks like. So when I have an unknown, I can compare it to  
4 it right there and make sure that it's a match.

5 Q. And are the methods you just described accepted  
6 throughout your field in the scientific community?

7 A. Yes. So the visual identification of bird parts or  
8 animal parts is the foundation for zoology. It's the  
9 foundation of all of bird science, how we classify and  
10 identify birds. And it's used by biologists, by  
11 archeologists, taxonomists, anatomists. It is the -- kind  
12 of the foundation of most of zoology. And there's a large  
13 body of scientific literature out there to show the rigor --  
14 the scientific rigor of this field.

15 MR. ROBERTS: Your Honor, at this time I'd ask  
16 that Ms. Gaffney be recognized as an expert in her field.

17 THE COURT: Any objection?

18 MR. LYNN: No, Your Honor.

19 THE COURT: She will be recognized as an expert.

20 Q. (BY MR. ROBERTS) Ms. Gaffney, I want to direct your  
21 attention specifically to March of 2019. Did you receive  
22 some items from Special Agent Matthew Bryant with the Fish  
23 and Wildlife Service?

24 A. Yes. In March, I checked out items from Special Agent  
25 Bryant from our evidence unit.

1 Q. And can you give the jury just an idea how that works?

2 A. Absolutely. So the evidence is sent in from a special  
3 agent or an investigator, and that comes into our evidence  
4 unit. And that evidence then gets checked out by me. And  
5 there's a chain of custody that we sign, then it gets  
6 logged. Once I have that evidence, then I examine that  
7 evidence and I document those species' diagnostic  
8 characters, and I compare that to reference collection and  
9 the scientific literature to make an identification.

10 Q. And you said that you checked out the request from  
11 Special Agent Bryant, and did you make a report of that?

12 A. I did.

13 Q. And I'm going to show you what's been previously  
14 admitted as Government's Exhibit 8. Let us know if you  
15 recognize that.

16 A. I do.

17 Q. And what is it?

18 A. That is my report, my morphology report.

19 Q. Now, what is it that we're looking at here? It says  
20 evidence received. Is that the items that you indicated  
21 that you checked out?

22 A. Yes.

23 Q. And it just -- like, for example, bag of feathers from,  
24 and it just lists different things; correct?

25 A. Yeah.

1 Q. And that's how it's described in the bag or what it's  
2 kept in?

3 A. Yes.

4 Q. And you -- can you tell us exactly how many different  
5 items you collected?

6 A. I checked out 66 items from our evidence unit.

7 Q. And that's denoted there by lab 66. And then further in  
8 your report, it breaks down, for example, what you  
9 discovered was in bag lab -- or lab bag number 1. This is  
10 what your analysis was; correct?

11 A. Yes.

12 Q. And this is a final report of your morphology  
13 examination?

14 A. Yes.

15 Q. And the process that you described earlier about --  
16 that is how you go about identifying eagle parts, did you do  
17 that in this case as well?

18 A. Yes.

19 Q. And how much of this case was eagle material?

20 A. There were thousands of feathers and bird remains in  
21 this case, and about half were eagle remains.

22 Q. Was this the largest amount of eagle remains you've ever  
23 analyzed?

24 A. Yes.

25 Q. And what other species were identified?



1 A. There were a number of other species. The eagle remains  
2 identified in this case were identified to either bald --  
3 included bald and golden eagle.

4 Q. And there's a minimum number. Tell us about that.

5 A. Yes. So I calculate what's called minimum number of  
6 individuals, which is an MNI. And that is the minimum  
7 number of birds, in this case, that could have made up the  
8 evidence in front of me. What's the fewest number of birds,  
9 the most conservative estimate of birds that could make up  
10 this evidence in front of me.

11 Q. So you're basing that number based upon the different  
12 parts that you have in your analysis?

13 A. Yeah. I'm looking at the totality of the evidence and  
14 I'm --

15 Q. Were you able to determine that for the bald and golden  
16 eagles that you had in your possession?

17 A. I could.

18 Q. Now, I want -- I want to show you Exhibit 9. I'm going  
19 to try to turn it where it's probably the most -- can you  
20 tell us what this is?

21 A. Yes. So this is a scan of a right wing of an adult  
22 golden eagle. And so these are the outer wing feathers  
23 right -- birds have wing feathers that are attached to the  
24 hand bone, the primary wing feathers, these outer wing  
25 feathers. Then they have wing feathers that are attached to

1 the inner wing called secondaries. So this scan is of the  
2 primary feathers, the outer ones. And when we're talking  
3 about a specific outer wing feather, we number them. And so  
4 as can you see, the outermost wing feathers, the farthest  
5 one, a P10. And it gets numbered so on as you're moving  
6 from the outside of the wing in, so P10, P9, P8, P7.

7 Q. So one of the -- one of the reasons you're looking for  
8 that is to identify the type and species; correct?

9 A. Correct. Yes.

10 Q. And, but also to get your minimum number of  
11 individuals?

12 A. Yes. So these feathers are really unique, especially if  
13 you're looking at that outermost wing feather, that P10.  
14 It's shorter than all the rest, and it has a really  
15 distinctive shape. And so I can look for that feather in an  
16 assemblage of evidence, and that will represent like one  
17 individual. Because each bird only has one outermost wing  
18 feather on the right and one outermost wing feather on the  
19 left. And you can tell the side that it originates from  
20 from the shape of the feather.

21 Q. So, hypothetically, if you were to have a batch -- if I  
22 were to bring you a batch of evidence that had 12 P10  
23 feathers in it, what would that tell you?

24 A. If they were all right P10 feathers, that means there  
25 would be at least 12 birds there.

1 Q. So did you have a chance -- I want to -- we've  
2 previously had items 11 through 28 admitted into evidence.  
3 Have you had a chance to look at those --

4 A. Yes.

5 Q. -- prior to testimony? And were you able to see -- I'm  
6 going to go ahead and show Number 10. Do you recognize  
7 that, and can you tell the jury what it is they're looking  
8 at?

9 A. Yes. So this was lab 9 of the evidence that I checked  
10 out from our evidence unit that I examined, and it is three  
11 golden eagle wing feathers. And we can see that they're  
12 golden eagle because -- do you see the texture on the  
13 feathers? It almost looks like it's been painted like a  
14 watercolor. This pattern is what we call marbling. And so  
15 only golden eagles have this marbling pattern. And it's  
16 really clear on these feathers that that's marbling, and so  
17 these feathers could only originate from a golden eagle.

18 Q. Now, were there other items that you had chance to look  
19 at that you would say would be more important than the  
20 others, or should we just go through it a little bit at a  
21 time?

22 A. We can go through a little bit.

23 Q. Okay. Here's Number 11. Can you let us know what we're  
24 looking at there and the significance of it?

25 A. Absolutely. So just like the last three feathers you

1 looked at had that marbling pattern, this has a modeling  
2 pattern. So those are two words we use. Modeling almost  
3 looks like mud or paint spattered rather than like a  
4 watercolor pattern. And so this modeling pattern is  
5 diagnostic of bald eagles, and so these three feathers  
6 originated from a bald eagle.

7 Q. And what were these -- these to the left of it?

8 A. Those are what we call contour feathers or body  
9 feathers. So they're smaller, and whereas the feathers on  
10 the right are wing feathers, they've got a really strong  
11 rachis or quill, they're very -- they've got a much firmer  
12 texture and they're used in the wing -- or, yeah, these are  
13 wing feathers. Sorry. But the fluffy feathers are the body  
14 feathers, so they're not as sturdy.

15 Q. And then this is 12. Can you tell us what this is? I  
16 think this is kind of what you were talking about in your  
17 illustration; correct?

18 A. Absolutely. So this is -- these are wing feathers from  
19 a sub-adult golden eagle. And so these are the wing  
20 feathers when they're not in the wing. They've all been  
21 taken out, and you can kind of see some of the material that  
22 the wing feathers were taken from, the skin and debris at  
23 the base of the feathers. But those outer three feathers  
24 are that P10 feather, that outermost wing feather. And you  
25 can see by the shape that they're all from the same side.

1 These are all right P10s. So based on this, this has to  
2 come from at least three birds because there are three  
3 outermost wing feathers. And then the other feathers are  
4 additional wing feathers from a right wing.

5 Q. This is Government's 13. This is obviously in a  
6 different -- different state. What is that?

7 A. So this is a crafted item made from golden eagle  
8 feathers. And this appears to be what looked like two wings  
9 that have been -- the feathers have been taken and kind of  
10 built inward, so two separate wings that have been formed to  
11 form the first item. And then the second item, there are an  
12 additional two wings, a right and a left.

13 Q. So four items total. There's two of these laying on  
14 top -- one laying on top of another?

15 A. Yes. So there are at least two birds represented here.  
16 This is another golden eagle. This one is an adult. You  
17 can see that marbling pattern. It's a little dark in this  
18 picture. But that marbling pattern indicates golden eagle.  
19 And this is a right and a left wing that have been taken to  
20 form this one crafted item.

21 Q. So you would say that represents probably one wing -- or  
22 two wings from one bird?

23 A. Yes. The pattern is very consistent. The size of the  
24 feathers are consistent with each other. Birds tend to  
25 mirror each other. Their right wing looks like their left

1 wing. And so when you have consistency in size and pattern,  
2 you can tell that it likely came from the same bird.

3 This is another one of those crafted items  
4 that represents likely one bird. It has a right and a left  
5 wing.

6 Q. And, again, this was in that same batch that Agent  
7 Bryant had you look at?

8 A. Yep. So the item -- the crafted item on the far left of  
9 this picture is a sub-adult golden eagle, which means a  
10 younger golden eagle wing. And it -- likely these feathers  
11 weren't pulled. That wing is just wrapped in what looks  
12 like leather at the base. And then that the second item  
13 with the white tail feathers are the tail feathers of an  
14 adult bald eagle. So we've got a sub-adult golden eagle  
15 wing, and then a tail of an adult bald eagle.

16 Q. This is Government's 17. Is this -- this is, again,  
17 from the same lab pull; correct?

18 A. Yes.

19 Q. And what is it we're looking at there?

20 A. So when we're looking at sub-adult golden eagle wings,  
21 right, especially because this may look a little similar to  
22 some of that modeling I was describing earlier, this  
23 modeling is not really modeling because it doesn't extend  
24 through the whole feather. You see how the base of the wing  
25 feathers are pure white? And it's right where my hand kind

1 of overlaps. But that pure white base, and there's a little  
2 bit of marbling at the tip of those feathers, tells me that  
3 this is from a golden eagle. And, consistently, golden  
4 eagles have pure white bases to both their body feathers and  
5 their wing feathers when they're not full adults, when they  
6 haven't yet reached at least four years of age. So golden  
7 eagles mature to full adult at four years, whereas bald  
8 eagles mature to adulthood at five years.

9 Q. So based on this coloring, you would say this was not a  
10 mature eagle yet?

11 A. Right. And bald eagles, when they mature, they get a  
12 pure white tail. They're what you classically think of as  
13 the white head with the white tail. And this -- these tail  
14 feathers have come from an adult bald eagle.

15 Q. In this one that we're looking at right here?

16 A. In this item here, yeah.

17 Q. And you base that on the color?

18 A. Yeah. The pure white color, the large size, the thick  
19 rachis. So there are some other characters that I'll look  
20 at. The rachis is that central quill that runs through the  
21 shaft of the feather. And there are characters that I can  
22 rule out if this came from like a turkey, for example.

23 Turkeys have very specific characters that are easily ruled  
24 out from these feathers.

25 Q. This is kind of sampling. What are we looking at

1       there?

2       A.   So, again, these are sub-adult young golden eagle  
3       feathers. And you can tell that by their pure white bases.  
4       But they've got a little bit of that marbling on the two  
5       feathers in the center of this picture with the yellow at  
6       the base. And if you look at the feathers that are inside  
7       the case, yeah, those are tail feathers based on their  
8       shape, and they've got dark tips. And so these come from a  
9       young golden eagle.

10      Q.   This case that it was in, that was the case that you  
11      found it in? That isn't one you put it in?

12      A.   No. Yeah, I received this item as such, and I opened  
13      that case to take out these feathers to examine them.

14      Q.   What is it that we're looking at here in 21?

15      A.   This is lab 17. This is in a group of golden eagle  
16      feathers. So this has both adult and sub-adult feathers in  
17      it. But there are a very large number of golden eagle  
18      feathers.

19      Q.   And was it packaged that way by you, or before you got  
20      it?

21      A.   It was packaged that way when I received it.

22      Q.   And this is a different one than the previous one;  
23      correct?

24      A.   Yes. And these are bald eagle feathers in addition to a  
25      wing bone and partial wing in that far, yeah, Ziplock bag.



1 Q. And, again, a large number; correct?

2 A. Yep. These are a pair of wings from a sub-adult bald  
3 eagle. They've got that modeling pattern on the upper part  
4 of the wing, and these have obviously been detached from the  
5 body of a bird.

6 Q. Down here are those P10s that you were speaking about  
7 earlier; correct?

8 A. Yeah. They are a little higher. But they're that  
9 outermost wing feather. Yep.

10 And this is, again, a detached pair of wings.  
11 And these are the feet of a bald eagle and the head of a  
12 bald eagle. And the outer primary feathers, those outer  
13 hand feathers have been removed from that right wing that's  
14 in the center of the photo.

15 Q. So this one is missing these?

16 A. Yep.

17 Q. This is -- these are different than the previous set of  
18 wings we just saw?

19 A. Yes. This came from lab 56, and the previous set of  
20 wings came, I do believe, from another lab item.

21 Q. Okay.

22 A. These are the three heads of golden eagles. And they  
23 have a very distinctive bill shape. They've got a dark  
24 head. The hackles, which are the back of the head feathers  
25 on a golden eagle, when they're adults they get this golden,

1 tawny color. And so they're -- based on their bill shape  
2 and their plumage pattern, you can tell that these three  
3 heads have come from a golden eagle, or three golden eagles.

4 And these six detached heads have come from  
5 bald eagles. And so the bill on a bald eagle is more  
6 robust. It's almost more bulbous, more round in shape,  
7 tends to be larger. And obviously their plumage patterns  
8 are different. There's a pure white head in the bottom  
9 corner. And you can see modeling pattern on some of the  
10 feathers of the heads on the left. But with comparison to  
11 our reference collection, it's very easy to tell a bald  
12 eagle head from a golden eagle head.

13 Q. And going back to when you talked about feather  
14 identification, for example, if there's ten of one  
15 particular type, that means that there's ten of a particular  
16 bird. Obviously, this is a very elementary way of summing  
17 that up; correct? If there's six heads, there's six  
18 different birds; correct?

19 A. Yes.

20 Q. And same with -- same with Government's 27, too, I'm  
21 assuming; correct?

22 A. Correct. And so these are the feet of six sets of bald  
23 eagles. And we can tell that by looking at their bare feet.  
24 So you see how the feathers kind of end midway to their  
25 feet, and they've got these bald bare feet. They're huge.

1 The large size, the large talons, they're raptorial in  
2 shape, these have all come from bald eagles. Whereas,  
3 golden eagles have feathers that come all the way down to  
4 their toes. Which he will now show you.

5 So you can see how the feathers extend all  
6 the way to the base of the toes on these birds. And so  
7 golden eagles have these feathered -- what we call tarsi  
8 feathered feet all the way to their toes.

9 Q. Now, did you -- were able I think -- if I asked you  
10 this, I apologize. Were you able to determine minimum  
11 number of bald eagles and gold eagles?

12 A. I was.

13 Q. And what did you determine?

14 A. That there were seven bald eagles represented, and seven  
15 golden eagles represented by this evidence.

16 Q. And there was additional other items, but the eagles  
17 were the ones that you particularly accounted for as far as  
18 your testimony today; correct?

19 A. Correct.

20 MR. ROBERTS: Your Honor, may I have just a  
21 moment?

22 THE COURT: You may.

23 MR. ROBERTS: I don't have any more questions for  
24 this witness, Your Honor. I'd pass the witness.

25 THE COURT: Cross-examination, Mr. Lynn?

1 MR. LYNN: No questions, Your Honor.

2 THE COURT: All right. May this witness be  
3 excused?

4 MR. ROBERTS: Yes, Your Honor.

5 THE COURT: All right. Thank you, Ms. Gaffney.  
6 You may step down and be excused.

7 THE WITNESS: Thank you.

8 *(End of requested proceedings)*

9 \* \* \* \* \*

10 REPORTER'S CERTIFICATE

11 I CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT  
12 TRANSCRIPT OF THE PROCEEDINGS IN THE ABOVE-ENTITLED MATTER.

13 s/Ken Sidwell  
14 Ken Sidwell, CSR-RPR  
United States Court Reporter  
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